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Military Installation Energy Collaborative (MIEC)



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Military Installation Energy Collaborative

- What is this group?
 - It is a collaborative committee:
 - Utah Military Installation Facilities Operation and Energy Managers
 - TEAD, DPG, HAFB, Camp Williams
 - Utah State Facilities Operation Managers
 - Utah National Guard and Armories
 - GOED
 - Other Stake Holders (interested in Energy Security)



Military Installation Energy Collaborative

- Why is GOED Involved:
 - Economic importance of Utah's Military Installations
 - Promote Synergies to accelerate progress
 - Support of Utah's Energy Self Sufficiency Goals
 - Renewal Energy
 - Energy Efficiency
 - Environmental Concerns
 - Job Growth (Military Installations, Green Tech)
 - Establish community buy-in
 - Be model for community initiatives



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- Why now?
 - DoD concern: Installation Energy Security and Mission Criticality
 - 2009 GAO report:
 - "Commercial electrical power grids have become increasingly fragile and vulnerable to extended disruptions that could severely impact the Defense Department's most critical assets, their supporting infrastructure and ultimately the missions they support,"
 - The problem is already evident. During 2006 through 2008, "at least 24 of the 34 most critical assets" experienced electrical power disruptions, some lasting up to seven days, the report said. And "the missions supported by three of those critical assets were adversely impacted".



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- Why now?
 - Costs
 - Office Deputy Under Secretary Defense (DUSD (I&E) Facilities Energy Directorate
 - In accordance with the Energy Policy Act of 1992, the [Energy Policy Act of 2005](#) and [Executive Order 13123](#), the Federal Government shall significantly improve its energy management in order to save taxpayer dollars, reduce emissions that contribute to air pollution and global climate change, and enhance national security.
 - The Department of Defense (DoD) spent over \$3.4 billion on facility energy consumption in FY 2007. DoD is the largest single energy consumer in the Nation representing approximately 78% of the federal sector, and a significant (and sometimes the largest) energy user in many local metropolitan areas.
 - Conserving energy and investing in energy reduction measures makes good business sense and allows limited resources to be applied to readiness and modernization



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- What should be done and when?
 - Concern have been on-going regarding energy self-sufficiency since the 1950's:
 - Truman's Paley commission was concerned for the DoD's and US's reliance on petroleum imports but also the security issues associated with DoD installations connectivity to the "grid". The commission recommended aggressive research into solar energy and de-centralization of the electrical transmission infrastructure.
 - FEMA study in 1980 recognized vulnerability of electrical transmission infrastructure and recommended "de-centralization."
 - Congress allocated funds to DoD in 2002 to perform a Renewal Energy Assessment.



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- 2002 DoD's Renewable Energy Assessment Team
 - Explored solar, wind and geothermal energy resources at military installations.
 - Led by the U.S. Air Force, the team conducted on-site assessments at military bases in the Continental United States. Summarized the wind, solar, and geothermal resources identified at installations and surrounding regions (within ~100 miles).
 - The team made recommendations on how to economically purchase renewable energy and encourage the growth of on-site energy development at select military bases.
 - Reviewed established and new technologies for collecting, storing and transmitting renewable power.
 - The team defined the benefits and drawbacks of developing renewable resources, including reports on the efficiency, reliability, and vulnerability of the installation's energy systems and regional cost/reliability impacts.



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- 2005 Report to Congress of DoD's Implementation Plan
 - Combination of on-installation projects and commercial renewable energy purchases
 - Projects funded by:
 - Energy Conservation Investment Program (ECIP) MILCON
 - Third-party financing (EUL) or appropriations
 - Awareness, Training, Education
 - Installation "Certified Energy Manager"
 - Conferences, Seminars, Webinars
 - Establishment of Lead Service Experts
 - Air Force: Wind Power and renewable energy purchases
 - Navy: Solar, Geothermal, Wave and Ocean Thermal Energy Conversion (OTEC)



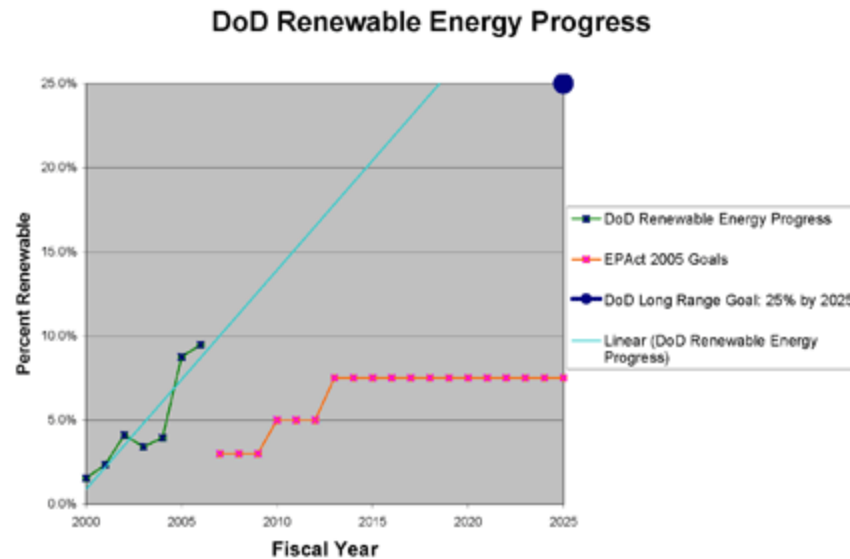
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- How has the plan been working?
 - DoD has teamed with DOE
 - DoD has reduced facilities energy use in FY'06 by 5.5% from FY'05 base year use
 - DoD established energy goals and reporting for;
 - Greenhouse Gas reduction
 - Reduced Energy and Water Consumption
 - Renewable Energy Procurement
 - Reduce reliance on Fossil fuels
 - On-installation energy production from renewable sources
 - On-going projects: Solar, Wind, Micro-Grids



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- How has the plan been working?



As of the end of 2005, renewable energy accounted for 8.3% of all electricity used by US military installations. The long term goal is 25% by 2025.



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- Progress on Utah Military Installations:
 - HAFB:
 - Camp Williams:
 - Tooele Army Depot:
 - Dugway Proving Grounds:
 - Utah National Guard Facilities:



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- Focus for the MIEC
 - [Energy Project Financing Mechanisms](#)
 - [Technologies](#)
 - [Operations and Maintenance](#)
 - [Utility Management](#)
 - [Information Resources](#)
 - [Project Development](#)
 - [Life-Cycle Cost Analysis](#)
 - [Procurement of Architectural and Engineering Services for Sustainable Buildings](#)
 - Training Opportunities
 - Unique Utah operational and implementation issues





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